Date 2000-01-05	ISO/DIS 10303-44.2
Secretariat ANSI/NIST	ISO/TC 184/SC4/ WG12 N466

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
Germany	**Issue Number:** GER-44.2-01 **Author:** Bernd Wenzel **Clause(s):** 5.3.5, p 24 **Classification:** minor technical **Description:** The attribute MARKET_CONTEXT in entity PRODUCT_CONCEPT should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way. **Proposed Solution:** Make the mandatory attribute optional **Resolution:** Modify the definition of market_context to replace the words "market context" with "frame of reference" and add a note that the attribute name is not being changed due to upward compatability, however the frame of reference is not to be restricted to a market context.	Accept
Germany	**Issue Number:** GER-44.2-02 **Author:** Bernd Wenzel **Clause(s):** 5.3.6, Page 25 **Classification:** minor technical	Reject

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Description: The attribute NAME in entity PRODUCT_CONCEPT_FEATURE should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way. **Resolution:** Will be addressed in general as a "default value for a null attribute. The Part 41 project leader will write SEDS issues against the appropriate methodology documents - Guidelines for Mapping Tables, Guidelines for AIM Development, etc.	
Germany	**Issue Number:** GER-44.2-03 **Author:** Bernd Wenzel **Clause(s):** 6.4.4, Page 32 **Classification:** minor technical **Description:** The attributes ID and NAME in entity CONFIGURATION_ITEM should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way. **Proposed Solution:** Make the attributes OPTIONAL **Resolution:**	Reject

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Will be addressed in general as a “default value for a null attribute. The Part 41 project leader will write SEDS issues against the appropriate methodology documents - Guidelines for Mapping Tables, Guidelines for AIM Development, etc.	
Sweeden	**Issue Number:** SWE-1 **Author:** Bernd Wenzel **Clause(s):** 5.3.5, p 24 **Classification:** minor technical **Description:** The attribute MARKET_CONTEXT in entity PRODUCT_CONCEPT should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way. **Proposed Solution:** Make the attributes OPTIONAL. **Resolution:** Modify the definition of market_context to replace the words "market context" with "frame of reference" and add a note that the attribute name is not being changed due to upward compatability, however the frame of reference is not to be restricted to a market context.	Accept
Sweeden	**Issue Number:** SWE-2 **Author:** Bernd Wenzel **Clause(s):** 5.3.6, Page 25	Reject

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Classification: minor technical **Description:** The attribute NAME in entity PRODUCT_CONCEPT_FEATURE should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way. **Proposed Solution:** Make the attributes OPTIONAL. **Resolution:** Will be addressed in general as a "default value for a null attribute. The Part 41 project leader will write SEDS issues against the appropriate methodology documents - Guidelines for Mapping Tables, Guidelines for AIM Development, etc.	
Sweeden	**Issue Number:** SWE-3 **Author:** Bernd Wenzel **Clause(s):** 6.4.4, Page 32 **Classification:** minor technical **Description:** The attributes ID and NAME in entity CONFIGURATION_ITEM should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible	Reject

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	to define the responsibility for such data in any reasonable way. **Proposed Solution:** Make the attributes OPTIONAL. **Resolution:** Will be addressed in general as a "default value for a null attribute. The Part 41 project leader will write SEDS issues against the appropriate methodology documents - Guidelines for Mapping Tables, Guidelines for AIM Development, etc.	
UK	**Issue Number:** UK-44-01 **Author:** Ray Goult **Clause(s):** **Classification:** editorial **Description:** The pagination of the preliminary part of the document is wrong with odd and even pages on the wrong sides of the paper. This could be corrected by introducing a blank page as backing for the ISO **Proposed Solution:** Fix the pagination. **Resolution:** Julian Fowler will take the action to work with Silvie Clivio to get this problem worked out at ISO central secretariat.	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
UK	**Issue Number:** UK-44-02 **Author:** Ray Goult **Clause(s):** Foreword **Classification:** editorial **Description:** The boiler plate text should be amended to take account of the new name `Integrated generic resource' for the 40 series parts. I suggest The parts of ISO 10303 fall into one of the following series: description methods, integrated generic resources, application interpreted protocols, ... This part of ISO 10303 is a member of the integrated generic resources series. The integrated generic resources specify a single conceptual product model. **Resolution:** This issue was addressed, a decision was made by the Secretariat, and that decision was final.	Reject
UK	**Issue Number:** UK-44-03 **Author:** Ray Goult **Clause(s):** Ray Goult **Classification:** editorial **Description:** In most of the EXPRESS-G diagrams the notation used for inter-schema references appears to be not in accordance with part 11 annex D - inner boxes should be oval. I suspect the problem is the lack of differential width for the outer box. **Proposed Solution:** Fix the boxes	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Resolution: Make the boxes long and thin boxes for REFERENCE FROM.	
UK	**Issue Number:** UK-44-04 **Author:** Julian Fowler **Clause(s):** Introduction **Classification:** minor technical **Description:** The wording of the Introduction is misleading with respect to the product_structure_schema. The text here refers to products and their composition, whereas the the schema deals primarily with relationships between and amongst product_definitions. **Proposed Solution:** Add text to the Introduction stating that the basis for the product_structure_schema is the description of the composition of products in terms of relationships between and amongst life-cycle and/or discipline views of products. **Resolution:** Add the following sentence to the first bullet: "These products are defined and related at a specific life cycle stage or discipline view."	Accept
UK	**Issue Number:** UK-44-05 **Author:** Julian Fowler **Clause(s):** Introduction **Classification:** minor technical	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Description: Is it true that the configuration_management_schema relates only to the manufacturing life-cycle stage? This seems to be contrary to the scope statement. It is not clear from the sentence describing this schema which product(s) are subject to configuration management. **Proposed Solution:** Clarify the intended applicability of the configuration_management_schema, and how it is applied to configuration management of different types of product at different stages in their life-cycle. **Resolution:** Modify the text to read: The configuration_management_schema identifies those products participating in the configuration of another product that is under the direct control of an organization.	
UK	**Issue Number:** UK-44-06 **Author:** Julian Fowler **Clause(s):** Introduction **Classification:** editorial **Description:** "Industrial automation" comprises much, much more than the topics listed in the bulleted list at the bottom of page vi, and in some cases would not include these. **Proposed Solution:** Replace the phrase "Industrial automation" by one more suited to the scope of this part. "Product data management" may be more appropriate. **Resolution:**	Reject

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Closed as unpersuasive	
UK	**Issue Number:** UK-44-07 **Author:** Julian Fowler **Clause(s):** Introduction **Classification:** editorial **Description:** The idea of "complexity" is subjective and should not form part of the description of an international standard. **Proposed Solution:** Remove references to "complexity" of product structure, etc. **Resolution:** remove the words, "and its complexity" from the first to items of the bulleted list, change "complexity" to "details" in the 1st paragraph after the bulleted list that describes the product_structure_schema	Accept
UK	**Issue Number:** UK-44-08 **Author:** Julian Fowler **Clause(s):** Introduction **Classification:** minor technical **Description:** There are a number of contradictions between the scope statement (clause 1) and the overview of this part provided in the Introduction. In particlar, the Introduction implies a number of scope constraints with respect to life-cycle phases. In particular, the text of Introduction refers explicitly to applicability of the schemas defined in this life-cycle part to design and manufacturing informartion, and nowhere to their	Accept

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	applicability to later life-cycle stages. **Proposed Solution:** Rewrirte the sections of the Introduction that summarize the schemas defined in this part and their applicablity, avoiding any explicit or implied variation from the scope described in clause 1. **Resolution:** 1. Paragraph on Product configuration - remove "manufacturing or assembly plans for", add ".description of the composition of specific products." 2. Remove the words, "of production" after "planned" and add "or actual" after "planned"	
UK	**Issue Number:** UK-44-09 **Author:** Julian Fowler **Clause(s):** 1 **Classification:** minor technical **Description:** It is not clear from the scope statement whether the term "product" refers to individual things or classes of things. There are some cases where this is clear from context (e.g., in the bullet following example 2 - individual things do not have versions); however, it should in all cases be made clear whether this part supports the representation of the structure of an individual product (as would be the case for operation and maintenance of a specific car, aircraft or process plant), or the representation of the common structure of the members of a class of products (which is what most of the text and **Proposed Solution:** Clarify the scope and provide additional examples.	Deferred

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	Resolution: The term "product" as used in the scope is intended to refer to things that satisfy the Part 1 definition of the term. Discussions within WG12 have already determined that the definition of the term "product" in Part 1 allows for both individual items, and something that is a class of individual items, depending on the context in which the product is represented. Because any change to this concept in the integrated resources would mean a non upwardly compatable modification to the data model, the issue will be deferred to a future release of Part 44.	
UK	**Issue Number:** UK-44-10 **Author:** Julian Fowler **Clause(s):** 1 **Classification:** minor technical **Description:** Given that this part specifies may subtypes of the product_definition_relationship entity data type it is difficult to understand the restriction imposed by the first "out of scope" bullet item. Is the intent here to state that this part only includes relationships between product_definitions that exist and/or are valid for the same life-cycle stage? **Proposed Solution:** Change "a product" to "products" in first In Scope bullet point Add a note after the first out of scope bullet point that says that relationshps among different definitions of the same product are within the scope of ISO 10303-41. **Resolution:** Change "a product" to "products" in first In Scope bullet point Add a note after the first out of scope bullet point that says that relationshps among different definitions of the same product are within the	Accept

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	scope of ISO 10303-41.	
UK	**Issue Number:** UK-44-11 **Author:** Julian Fowler **Clause(s):** General **Classification:** editorial **Description:** The document does not satisfy a number of the requirements of the ISO Central Secretariat for presentation of international standards. These requirements are identified in a number of standing document ballot issues (and one SEDS issue) against the ISO 10303 Supplementary Directives (SC4 N858). These include: placement of copyright notice in page footers, wording of page 1 header, form of reference to "to be published" normative references, etc. **Proposed Solution:** Incorporate the changes that have been made as of December 10. **Resolution:** Incorporate changes as described in the agreed second edition Supplementary Directives.	Accept
UK	**Issue Number:** UK-44-12 **Author:** Julian Fowler **Clause(s):** 3.3.2 **Classification:** minor technical **Description:** Does "instance" here have the meaning defined in ISO 10303-11, i.e., "a named value"? If so, then this	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	definition is incorrect, as the nodes of the graph referred to should be (in EXPRESS terms) complex entity instances. **Proposed Solution:** Clarify this definition, possibly by substituting another term for "instance". Part 43 uses "data element" as a general term that is roughly synonymous with "instance" but does not introduce the overhead of the EXPRESS instance model. **Resolution:** replace the word "instances" with "data elements"	
UK	**Issue Number:** UK-44-13 **Author:** Julian Fowler **Clause(s):** 3.3.8 **Classification:** editorial **Description:** The use of "when" in this definition implies that there is a temporal basis for effectivity. **Proposed Solution:** Replace "when" by "the circumstances in which", or similar. **Resolution:** change "when" to "whether"	Accept
UK	**Issue Number:** UK-44-14 **Author:** Julian Fowler **Clause(s):** 3.3.9	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Classification: editorial **Description:** This appears to be three concatenated definitions! **Proposed Solution:** If there is a specific meaning that applies to the phrase "form, fit and function" that is distinct from the combination of the three terms, this should be provided. Otherwise, "form", "fit" and "function" should be separately defined terms (or omitted, if their common/dictionary definitions are sufficient). **Resolution:** Write the definition to say that the term represents a collection of characteristics that include the shape of a product, the way it interfaces with other products, and the purpose that the product serves.	
UK	**Issue Number:** UK-44-15 **Author:** Julian Fowler **Clause(s):** 3.3.12 **Classification:** minor technical **Description:** Is "lot" synonymous with "batch"? In the example provided a group of yarns or textiles dyed using the same (physical) dye are generally identified by a common batch number. In the COED (9th edition) "batch" includes a definition corresponding to that given here; "lot" does not. Is this a US-English usage? **Proposed Solution:** Indicate that batch is a synonym for lot. **Resolution:**	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Include the term "batch" in the correct form for denoting synonyms for a term in the definitions in the method indicated by ID3 Clause C.3.3	
UK	**Issue Number:** UK-44-16 **Author:** Julian Fowler **Clause(s):** 4.3.1 **Classification:** minor technical **Description:** The definition of this entity data type implies that interchangeability is directed. In fact, if this entity data type represents the interchangeablity of A and B which is equivalent to the interchangeability of B and A - i.e., the association is not directed. The idea of an alternative is only directed in some higher context, e.g., A is an alternate for B in C. The text of the definition immediately preceding the EXPRESS declaration increases this confusion. **Proposed Solution:** Clarify the definition of this entity type, stating that the general case is that this relationship is symmetric, and stating how its population can/should be constrained to indicate that it is not symmetric. **Resolution:** In the first and third paragraphs replace "is interchangable" with "may be used in place of"; definition of basis attribute - replace "as interchangable with" with "in place of"	Accept
UK	**Issue Number:** UK-44-17 **Author:** Julian Fowler **Clause(s):** 4.3.1 **Classification:** minor technical	Defer

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Description: This entity data type is semantically a specialization of the product_relationship entity data type defined in ISO 10303-41. **Proposed Solution:** Modify the EXPRESS declaration of this entity data so that it is a subtype of product_relationship (preferred), or add a note stating the semantic relationship and explaining that the structural relationship is not asserted for reasons of upward compatability. **Resolution:** The issue is being deferred. The relationship may be a specialization and may not be. More analysis is required however, since nothing can be done due to upward compatability restrictions, that analysis will be deferred until the next edition of Part 44.	
UK	**Issue Number:** UK-44-18 **Author:** Julian Fowler **Clause(s):** 4.3.1 **Classification:** minor technical **Description:** Are the intended semantics of this entity data type that (a) it is possible for one product to be substituted for another, (b) it is permitted for one product to be substituted for another, or (c) both. The use of "may" in the definitions of the .base and .alternate relationships implies (b). **Proposed Solution:** Clarify definition - if the intent is (c) then provide examples of usage in both cases. **Resolution:**	Reject

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	The semantics of the entity is, in fact (b). The entity implies permissiveness.	
UK	**Issue Number:** UK-44-19 **Author:** Julian Fowler **Clause(s):** 4.3.2 **Classification:** minor technical **Description:** The definition of this entity data type implies that it is abstract with respect to its subtypes: **Proposed Solution:** Reword the definition to remove the implied/incorrect constraint. **Resolution:** Modify the second sentence of the definition to read, "The assembly_component_usage entity is a subtype of the product_definition_usage entity that should be used to establish a relationship between .."	Accept
UK	**Issue Number:** UK-44-20 **Author:** Julian Fowler **Clause(s):** 4.3.2 **Classification:** minor technical **Description:** NOTE 5 states that the reference_designator may be made unique in a schema that uses or specializes this entity data type. This should also state that a schema that uses or specializes it can also make population of this attribute mandatory. **Proposed Solution:**	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Reword as: "The reference_designator can be made mandatory, or constrained to be unique, or both, in a schema that uses or specializes this entity data type." Note use of "can" (possibility) rather than "may" (permission). **Resolution:** Rewrite the sentence as suggested.	
UK	**Issue Number:** UK-44-21 **Author:** Julian Fowler **Clause(s):** 4.3.5 **Classification:** minor technical **Description:** The definition of this entity data type implies that some activity of transformation is involved (albeit unspecified). **Proposed Solution:** Reword the definition to state that this entity data type represents an association between two products, such that one is the result of applying a manufacturing process to the other. **Resolution:** Reword the definition as follows, "The make_from_usage_option is a product_definition_usage in which one product is the result of applying a process to another product."	Accept
UK	**Issue Number:** UK-44-22 **Author:** Julian Fowler **Clause(s):** 4.3.5	Withdrawn

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Classification: minor technical **Description:** The definition of this entity type implies that one product is made from another. The EXPRESS declaration does not preclude an instantiation in which a make_from_usage_option associations : two product_definitions for the same product. **Proposed Solution:** Add a constraint to the entity data type declaration: WR2: SELF\product_definition_relationship.related_product_definition..formation.of_product :<>: SELF\product_definition_relationship.relating_product_definition..formation.of_product; (this constraint may actually be best defined in the product_definition_usage - I have not assessed the impact of placing this constraint in the supertype)	
UK	**Issue Number:** UK-44-23 **Author:** Julian Fowler **Clause(s):** 5.3.5 **Classification:** minor technical **Description:** The distinction between product_concept, product (Part 41) and product_category (Part 41) is not clear. All three entity data types appear to represent (or be capable of representing) classes of product. They do not appear to be truly distinct concepts; rather, they represent classes of product with different types of classification basis. Example 1 appears to state that organizations manufacture product_concepts, not products. **Proposed Solution:**	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Clarify the definition of this entity data type and provide examples that clearly distinguish it from the product and product_catgeory entity data types in Part 41. **Resolution:** Replace "is the idea of a class of similar products" with "is a type of product (see 3.3.4 of Part 41)" to make the reference to another part's definition see ID3 clause 6.6.6. change "as identified by" to "as defined by a producer to satisfy..." fix 1st bullet of 5.2 to reflect this change (ie from customer to producer). Add "type of product" as and imported definition.	
UK	**Issue Number:** UK-44-24 **Author:** Julian Fowler **Clause(s):** 6.3 **Classification:** editorial **Description:** ISO CS has granted SC4 an exception to the requirements of IDP3 that allows for "singleton" subclauses. It is therefore not necessary to have single subclause for this type declaration. **Resolution:** rejected - no change necessary – the current format is correct.	Reject
USA	**Issue Number:** USA-001 **Author:** Len Slovensky	Reject

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	Clause(s): 4.3.2
	Classification: minor technical
	
	Description:
	WR1 does not evaluate correctly by acyclic_product_definition_relationship.
	`ENTITY product_definition_usage`
	`  SUPERTYPE OF (ONEOF (make_from_usage_option,`
	`  assembly_component_usage))`
	`  SUBTYPE OF (product_definition_relationship);`
	`UNIQUE`
	`  UR1: SELF\product_definition_relationship.id,`
	`  SELF\product_definition_relationship.relating_product_definition,`
	`  SELF\product_definition_relationship.related_product_definition;`
	`WHERE`
	`  WR1: acyclic_product_definition_relationship`
	`  (SELF,`
	`  [SELF\product_definition_relationship.related_product_definition],`
	`  'PRODUCT_STRUCTURE_SCHEMA.PRODUCT_DEFINITION_USAGE');`
	`END_ENTITY;`
	
	Resolution:
	Rejected - The rule is correct when used in conjunction with the corrected funciton in the second edition of Part 41. This issue was reviewing the rule in conjunction with the 1st edition function.	

USA	**Issue Number:** USA-002 **Author:** Mitch GIlbert **Clause(s):** 6.4.3 **Classification:** major technical	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Description: The use of the basic_attribute_schema constructs from Part 41 to assign attributes to the representation entity causes ambiguity in APs that use this edition of this part, in addition to requiring unnecessary work-arounds to remove the ambiguity. The DERIVED attributes in configuration_design name and description cause the entities name_attribute, and description_-attribute to be implicitly interfaced when it is interfaced (explicitly or implicitly) into the AIM schema. This structure causes ambiguous semantics and extra unnecessary work for AIM developers (if they even detect the problem). The work-around in the APs to resolve the semantics, of course, is toexplicitly interface the name_attribute and description_attribute entities simply so a RULE may be written to disallow their **Proposed Solution:** Add a note referencing the clause in Annex E that will define the rule template for excluding the basic_attribute_schema constructs. NOTE - a template for constraining the population of the entity data types defined in the basic_attribute_schema is described in Annex E of ISO 10303-41:2000. **Resolution:** Add the note in the proposed solution. Additionally, a section should be added to the AIM Development Guidelines. The Part 43 project leader will write a SEDS issue against the AIM guidelines document.	
USA	**Issue Number:** USA-003 **Author:** David Price **Clause(s):** Foreword	Accept

MEMBER BODY	COMMENTS	OBSERVATIONS OF THE PROJECT
	Classification: editorial **Description:** The current Foreword says that this second edition cancels and replaces the 1994 IS edition of this IR. The 1994 IS edition needs to remain a valid standard as it is referenced by existing IS APs and APs and IRs under development. **Proposed Solution:** Modify the text of the foreword to remove the "cancels and replaces". **Resolution**: Modify the text of the forward to read, "International Standard ISO 10303-44 was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*, Subcommittee SC4, *Industrial data*. This second edition of ISO 10303-44 constitutes a technical revision of the first edition (ISO 10303-44:1994), which is provisionally retained to support continued use and maintenance of implementations based on the first edition, and to satisfy the normative references of other parts of ISO 10303. This edition incorporates the corrections published in ISO 10303-44/Cor.1:1999."	